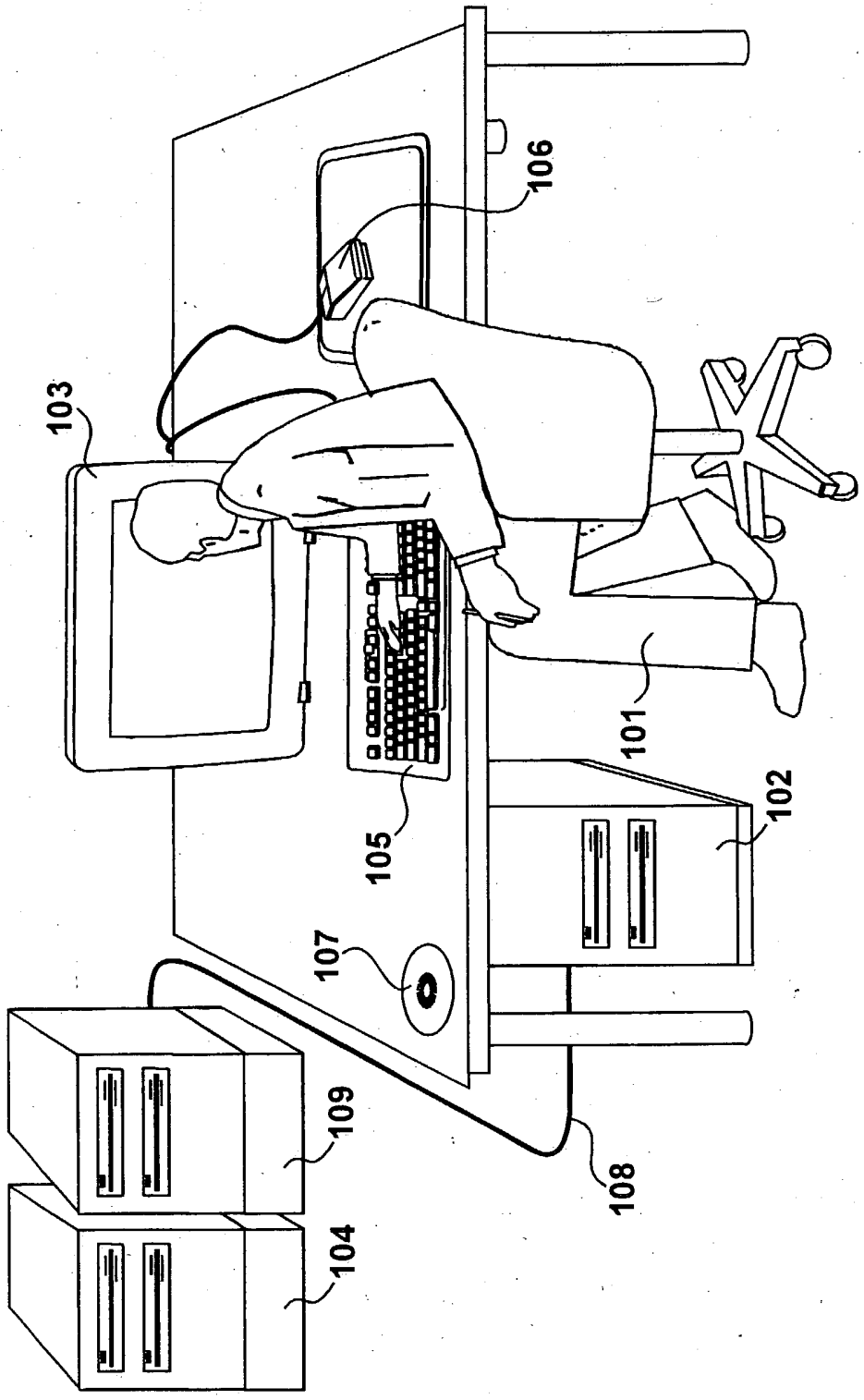


Figure 1

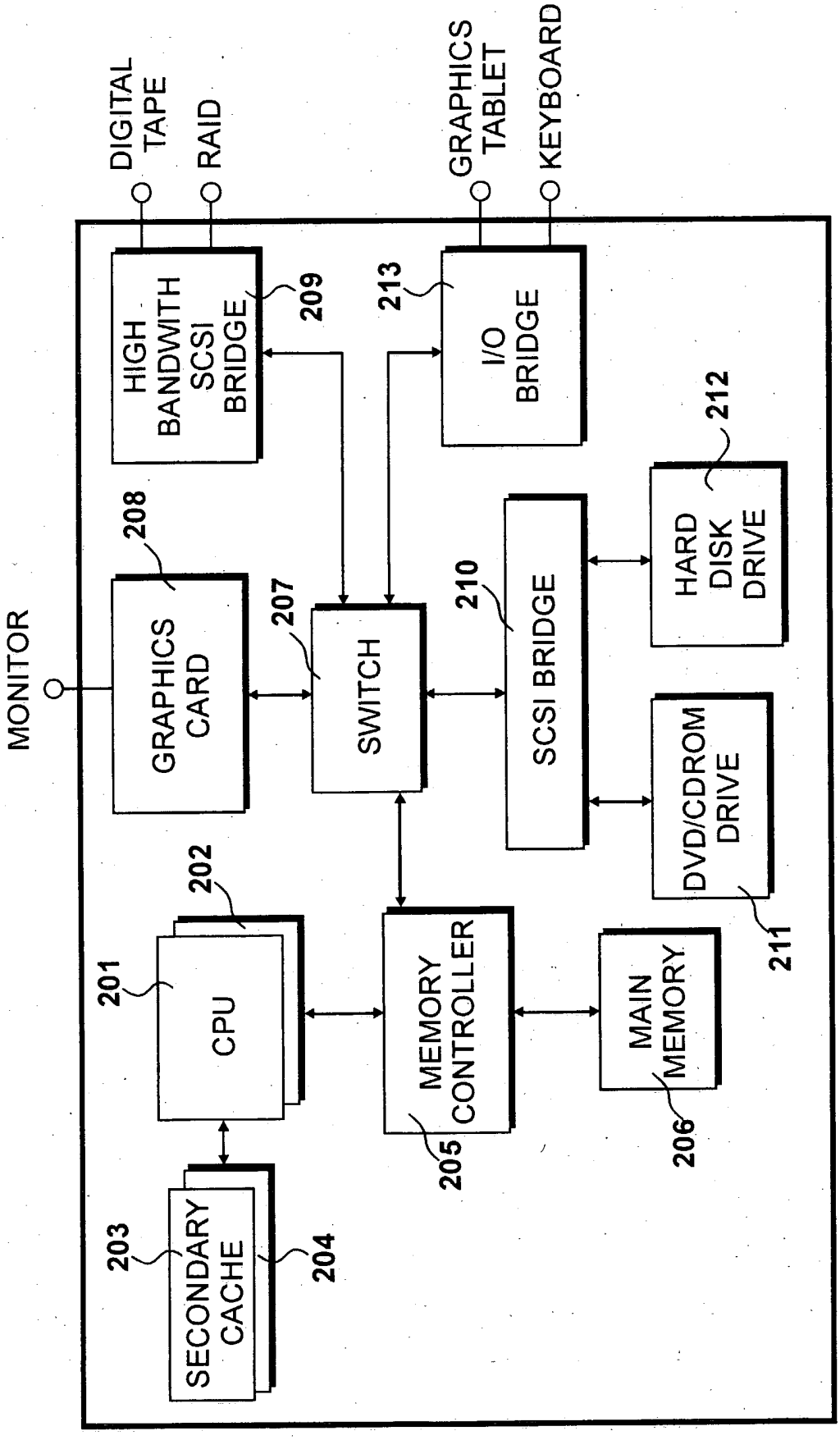

DIGITAL TAPE
RAID
GRAPHICS TABLET
KEYBOARD
HIGH BANDWITH SCSI BRIDGE
209
213
I/O BRIDGE
212
HARD DISK DRIVE
MONITOR
208
GRAPHICS CARD
207
SWITCH
210
SCSI BRIDGE
DVD/CDROM DRIVE
211
202
201
CPU
MEMORY CONTROLLER
MAIN MEMORY
206
205
203
SECONDARY CACHE
204

Figure 2

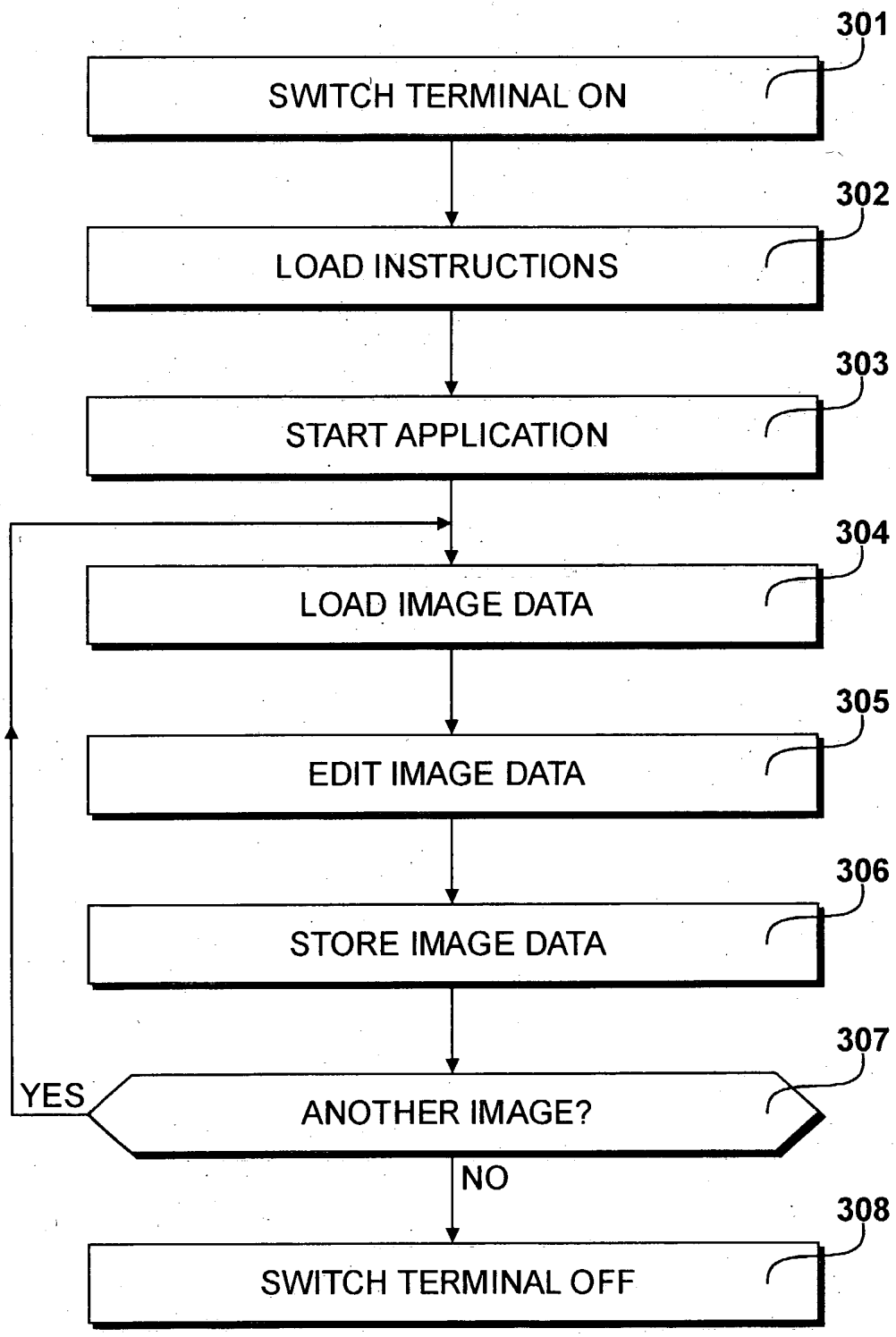

301
SWITCH TERMINAL ON
302
LOAD INSTRUCTIONS
303
START APPLICATION
304
LOAD IMAGE DATA
305
EDIT IMAGE DATA
306
STORE IMAGE DATA
307
YES
ANOTHER IMAGE?
NO
308
SWITCH TERMINAL OFF

Figure 3

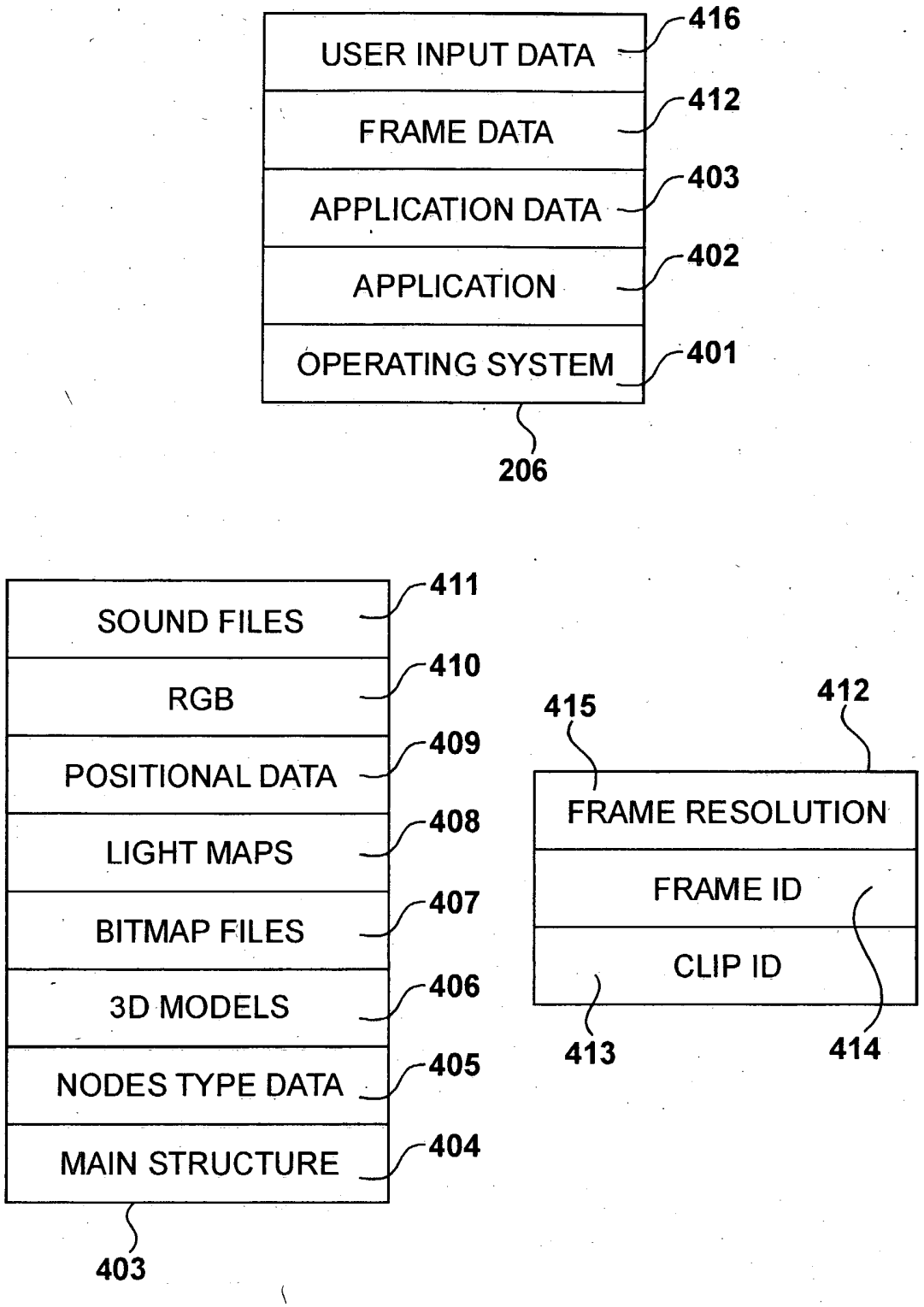

USER INPUT DATA
416
FRAME DATA
412
APPLICATION DATA
403
APPLICATION
402
OPERATING SYSTEM
401
206
SOUND FILES
411
RGB
410
POSITIONAL DATA
409
LIGHT MAPS
408
BITMAP FILES
407
3D MODELS
406
NODES TYPE DATA
405
MAIN STRUCTURE
404
403
415
412
FRAME RESOLUTION
FRAME ID
CLIP ID
413
414

Figure 4

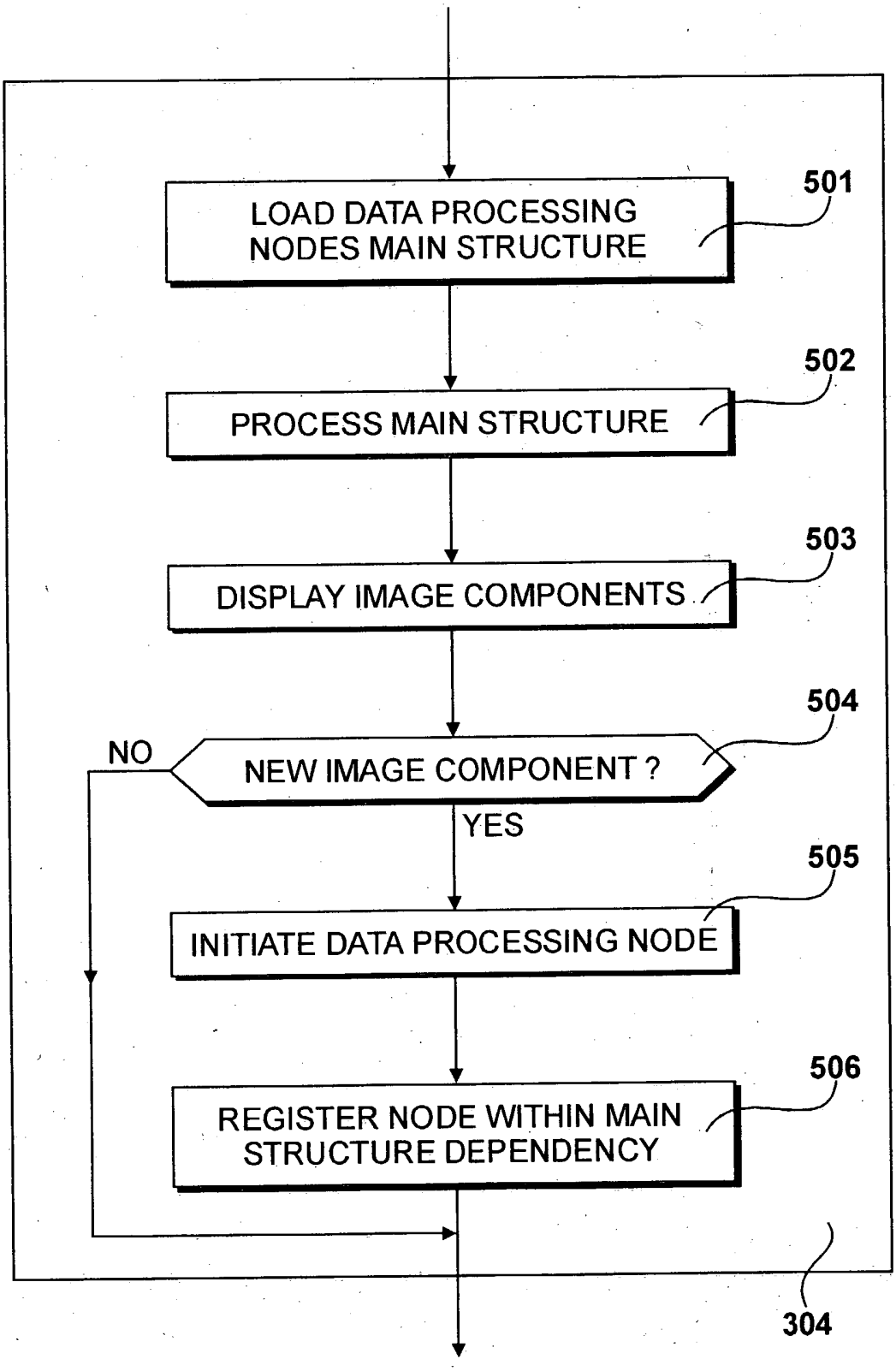

LOAD DATA PROCESSING NODES MAIN STRUCTURE
501
PROCESS MAIN STRUCTURE
502
DISPLAY IMAGE COMPONENTS
503
NEW IMAGE COMPONENT ?
504
NO
YES
INITIATE DATA PROCESSING NODE
505
REGISTER NODE WITHIN MAIN STRUCTURE DEPENDENCY
506
304

Figure 5

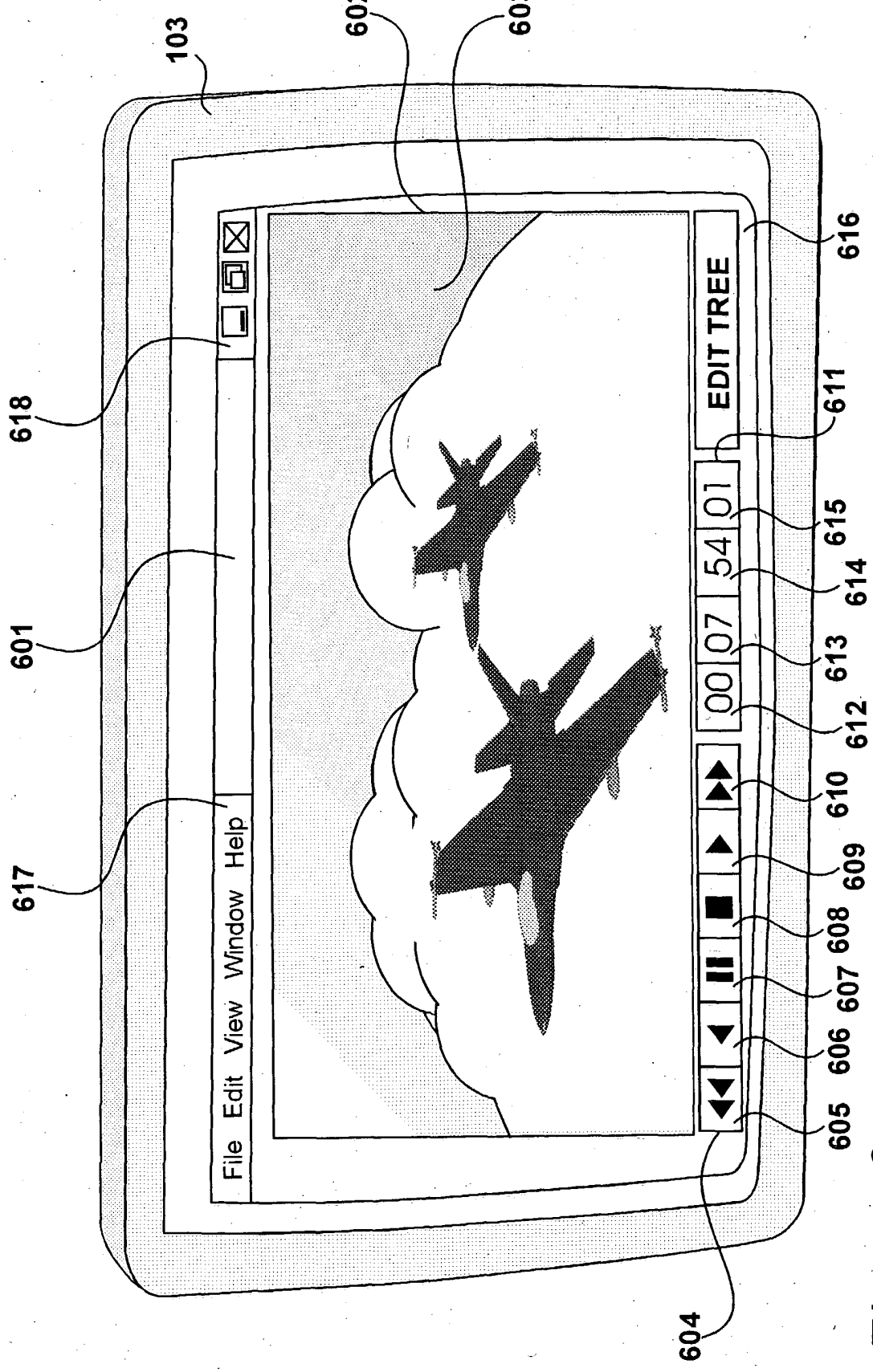

103
602
603
618
601
617
616
611
615
614
613
612
610
609
608
607
606
605
604
File Edit View Window Help
EDIT TREE
00 07 54 01

Figure 6

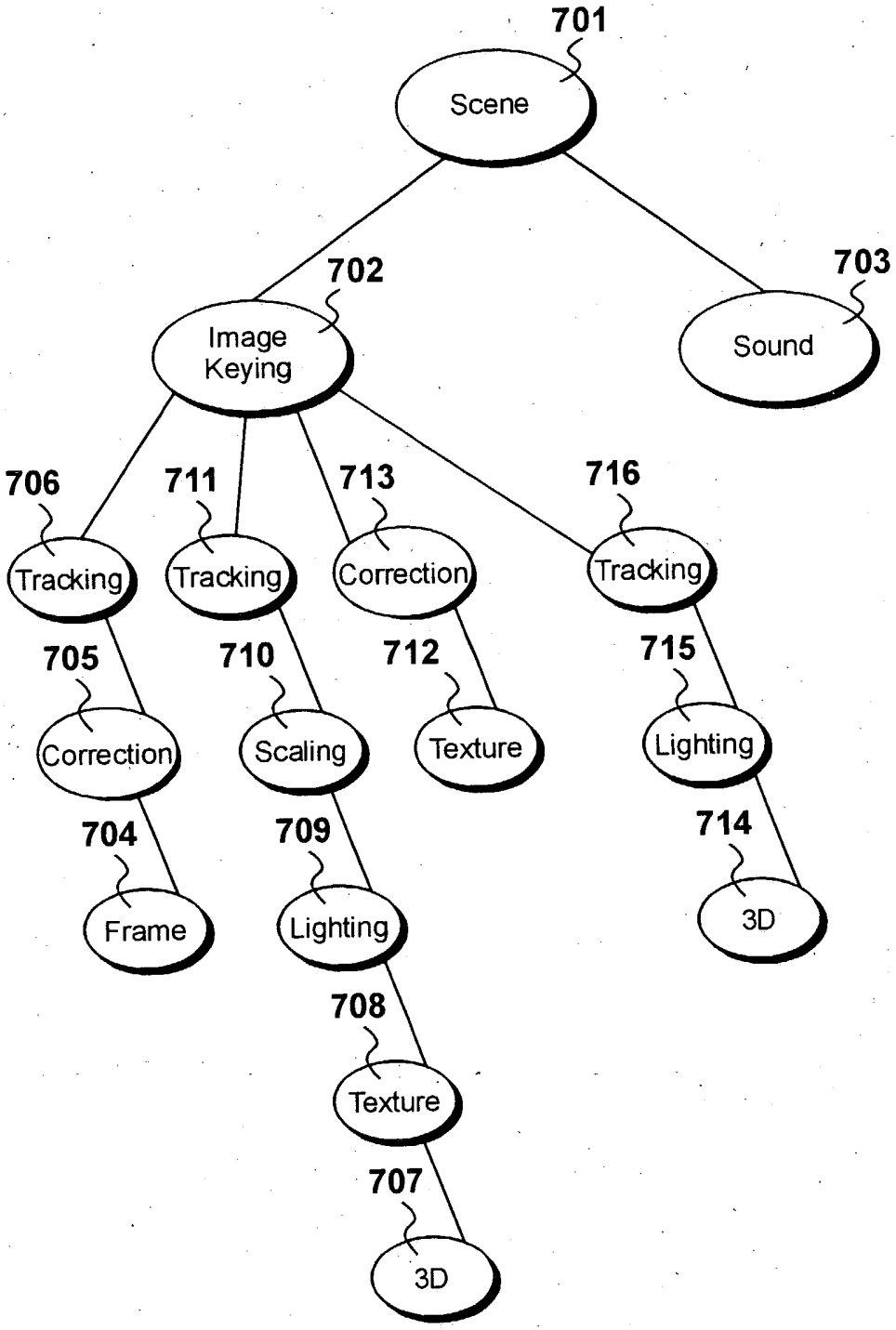
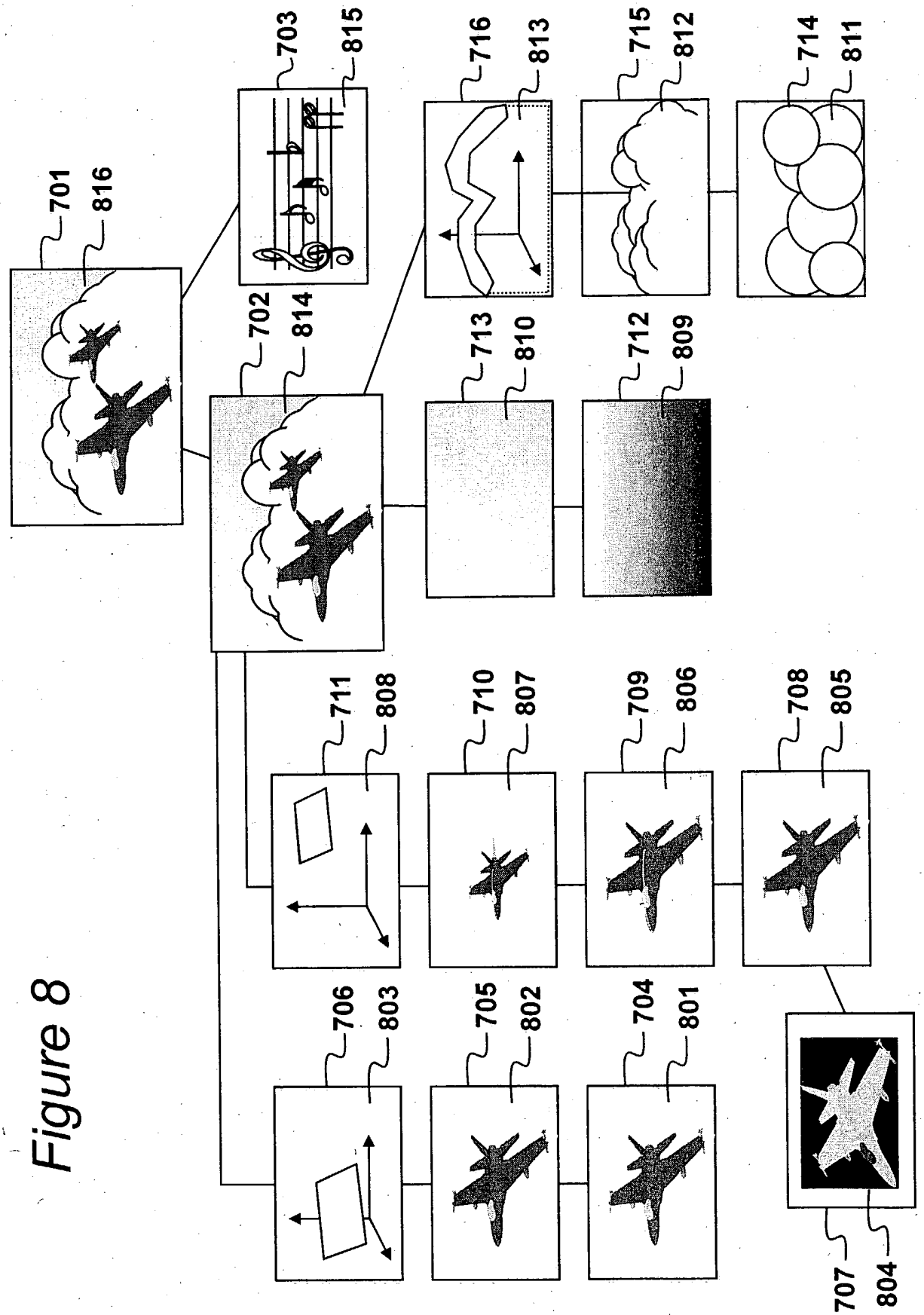
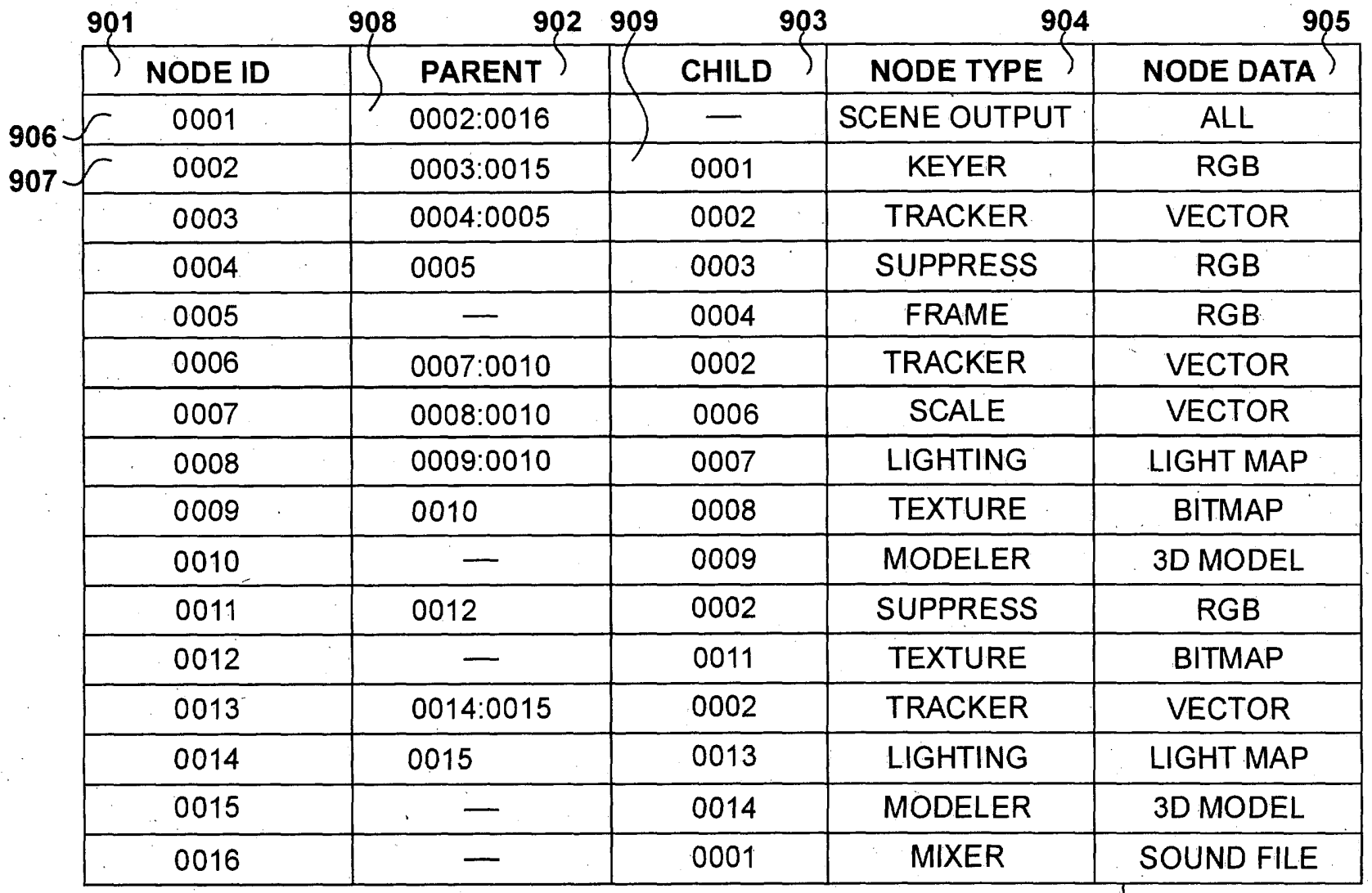

701
Scene
702
Image Keying
703
Sound
706
Tracking
711
Tracking
713
Correction
716
Tracking
705
Correction
710
Scaling
712
Texture
715
Lighting
704
Frame
709
Lighting
714
3D
708
Texture
707
3D

Figure 7

Figure 8


701
816
703
815
716
813
715
812
714
811
702
814
713
810
712
809
711
808
710
807
709
806
708
805
706
803
705
802
704
801
707
804



901 NODE ID	908 PARENT	902 909 CHILD	903 NODE TYPE	904 NODE DATA	905
0001	0002:0016	—	SCENE OUTPUT	ALL	
0002	0003:0015	0001	KEYER	RGB	
0003	0004:0005	0002	TRACKER	VECTOR	
0004	0005	0003	SUPPRESS	RGB	
0005	—	0004	FRAME	RGB	
0006	0007:0010	0002	TRACKER	VECTOR	
0007	0008:0010	0006	SCALE	VECTOR	
0008	0009:0010	0007	LIGHTING	LIGHT MAP	
0009	0010	0008	TEXTURE	BITMAP	
0010	—	0009	MODELER	3D MODEL	
0011	0012	0002	SUPPRESS	RGB	
0012	—	0011	TEXTURE	BITMAP	
0013	0014:0015	0002	TRACKER	VECTOR	
0014	0015	0013	LIGHTING	LIGHT MAP	
0015	—	0014	MODELER	3D MODEL	
0016	—	0001	MIXER	SOUND FILE	

906
907
404

Figure 9

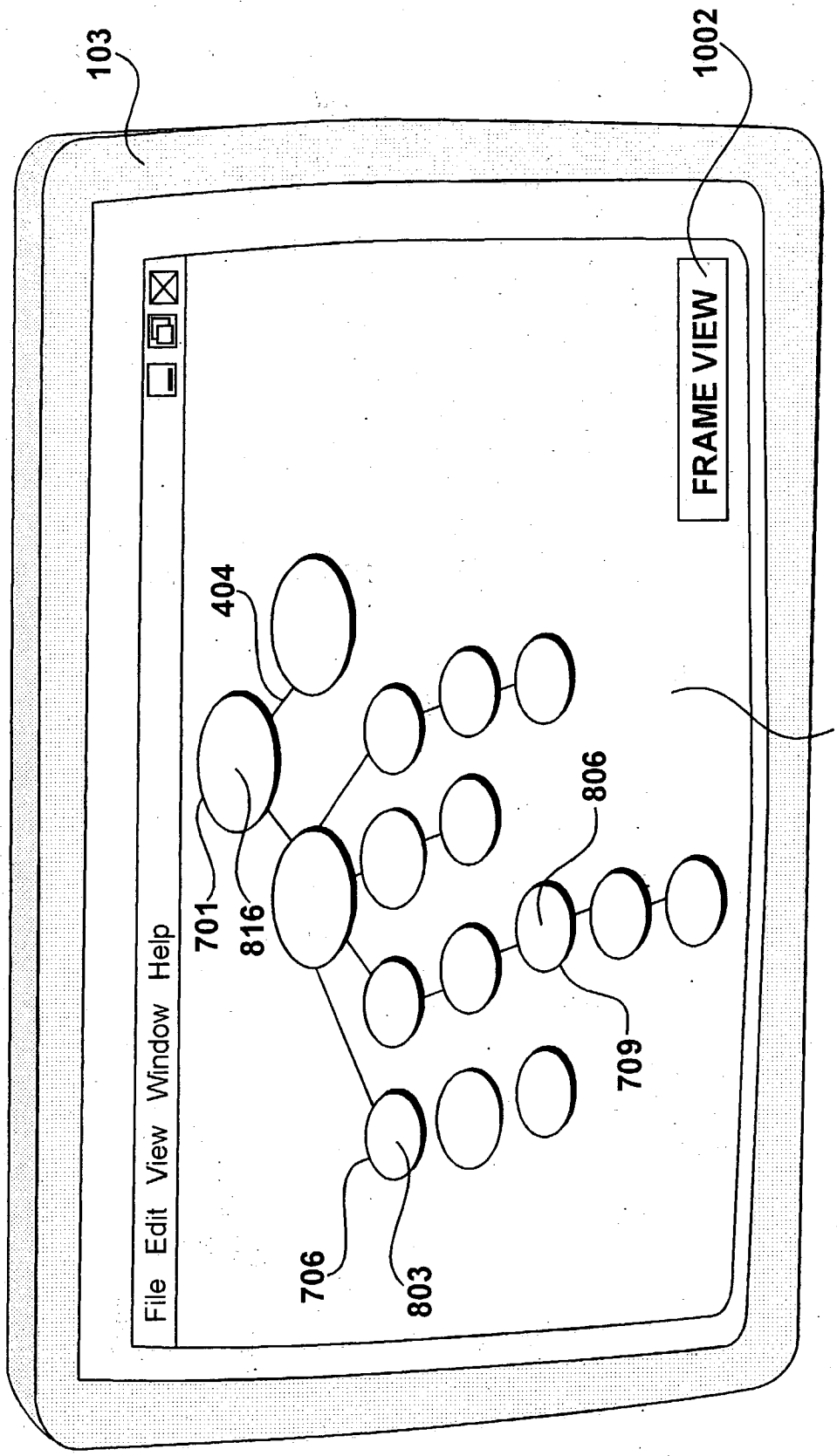

103
1002
FRAME VIEW
File Edit View Window Help
404
701
816
806
709
706
803
1001

Figure 10

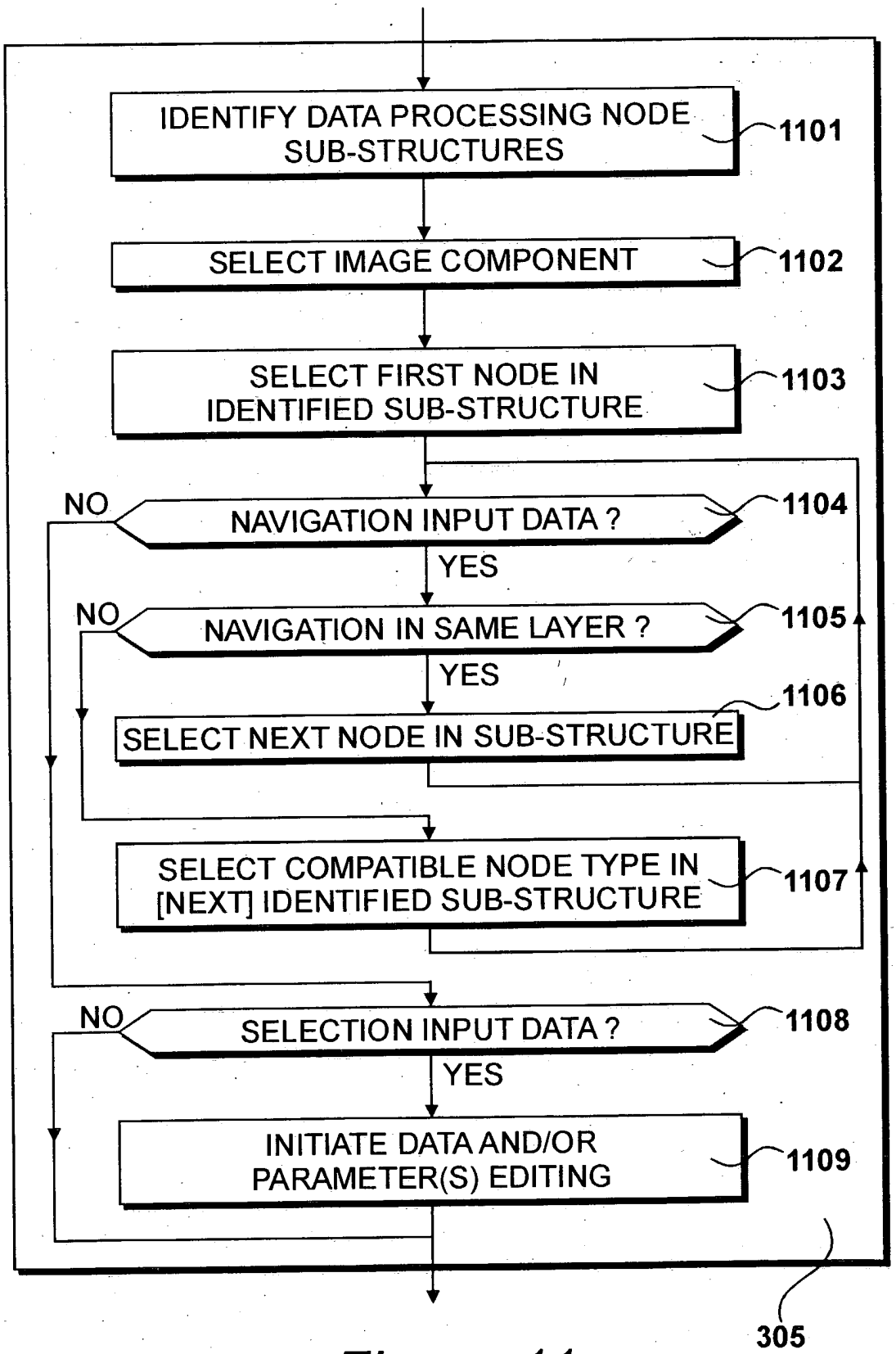

IDENTIFY DATA PROCESSING NODE SUB-STRUCTURES
1101
SELECT IMAGE COMPONENT
1102
SELECT FIRST NODE IN IDENTIFIED SUB-STRUCTURE
1103
NO
NAVIGATION INPUT DATA ?
1104
YES
NO
NAVIGATION IN SAME LAYER ?
1105
YES
1106
SELECT NEXT NODE IN SUB-STRUCTURE
SELECT COMPATIBLE NODE TYPE IN [NEXT] IDENTIFIED SUB-STRUCTURE
1107
NO
SELECTION INPUT DATA ?
1108
YES
INITIATE DATA AND/OR PARAMETER(S) EDITING
1109
305

Figure 11

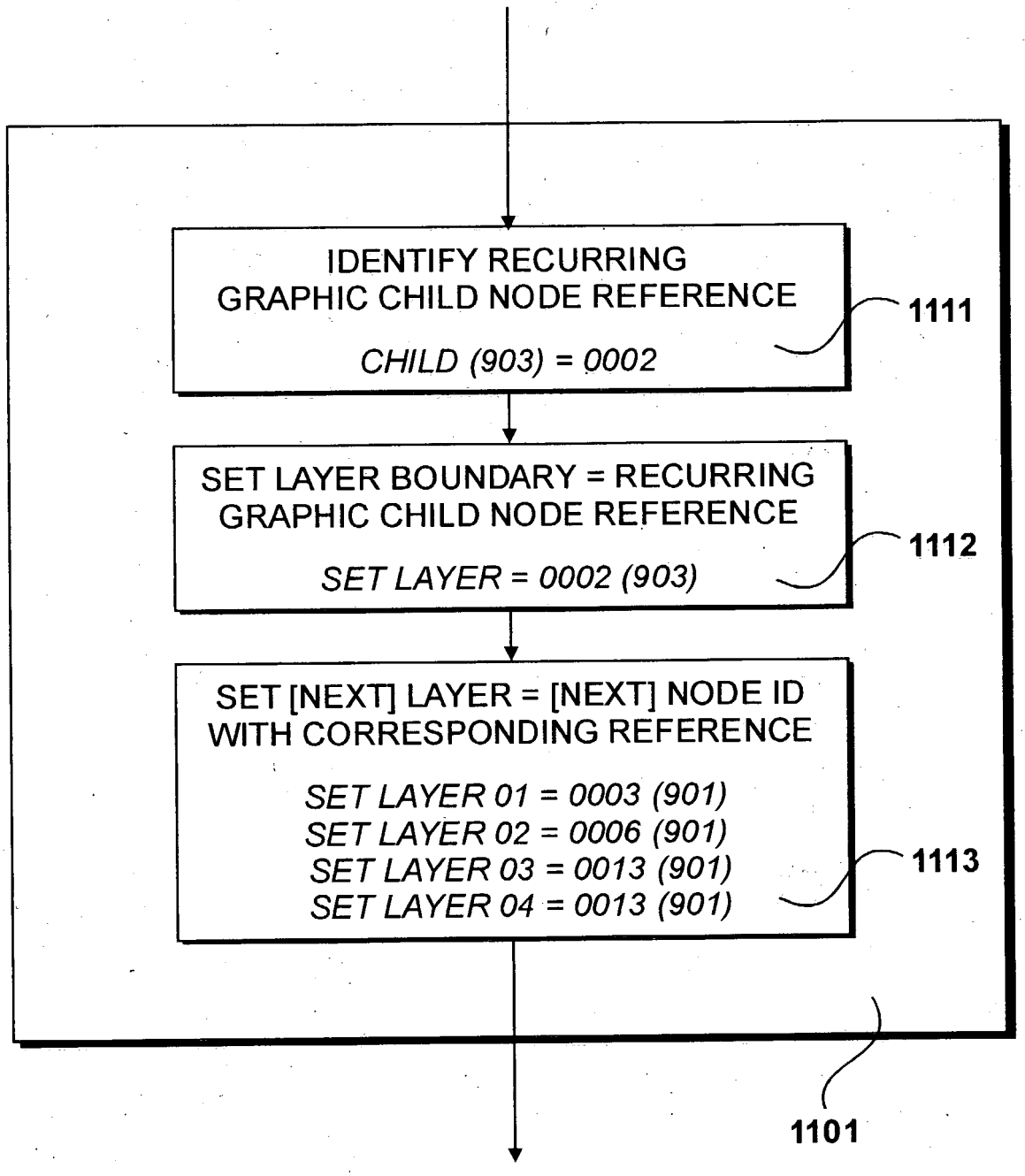

IDENTIFY RECURRING GRAPHIC CHILD NODE REFERENCE
CHILD (903) = 0002
1111
SET LAYER BOUNDARY = RECURRING GRAPHIC CHILD NODE REFERENCE
SET LAYER = 0002 (903)
1112
SET [NEXT] LAYER = [NEXT] NODE ID WITH CORRESPONDING REFERENCE
SET LAYER 01 = 0003 (901)
SET LAYER 02 = 0006 (901)
SET LAYER 03 = 0013 (901)
SET LAYER 04 = 0013 (901)
1113
1101

Figure 11A

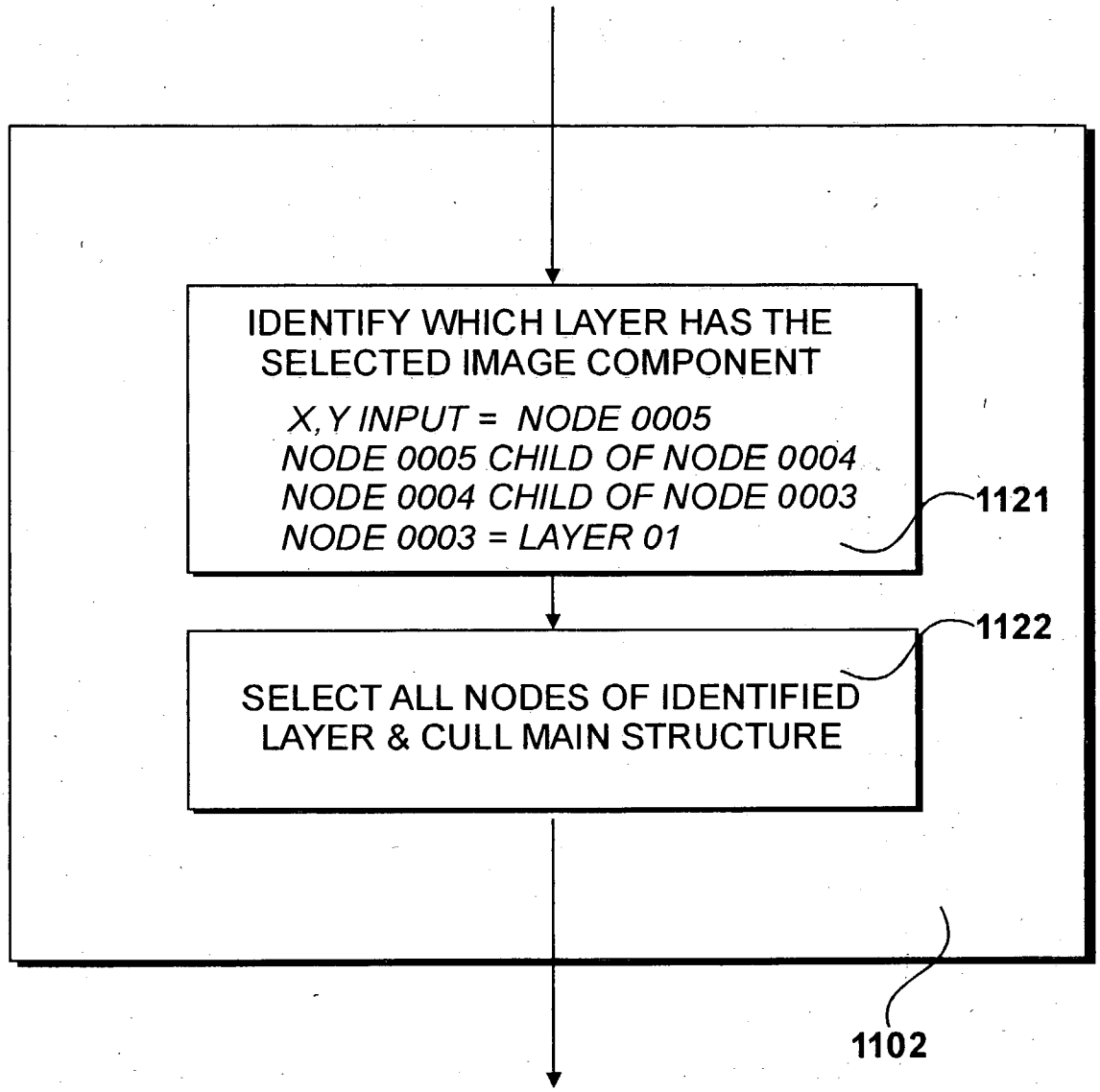

IDENTIFY WHICH LAYER HAS THE SELECTED IMAGE COMPONENT
X,Y INPUT = NODE 0005
NODE 0005 CHILD OF NODE 0004
NODE 0004 CHILD OF NODE 0003
NODE 0003 = LAYER 01
1121
SELECT ALL NODES OF IDENTIFIED LAYER & CULL MAIN STRUCTURE
1122
1102

Figure 11B

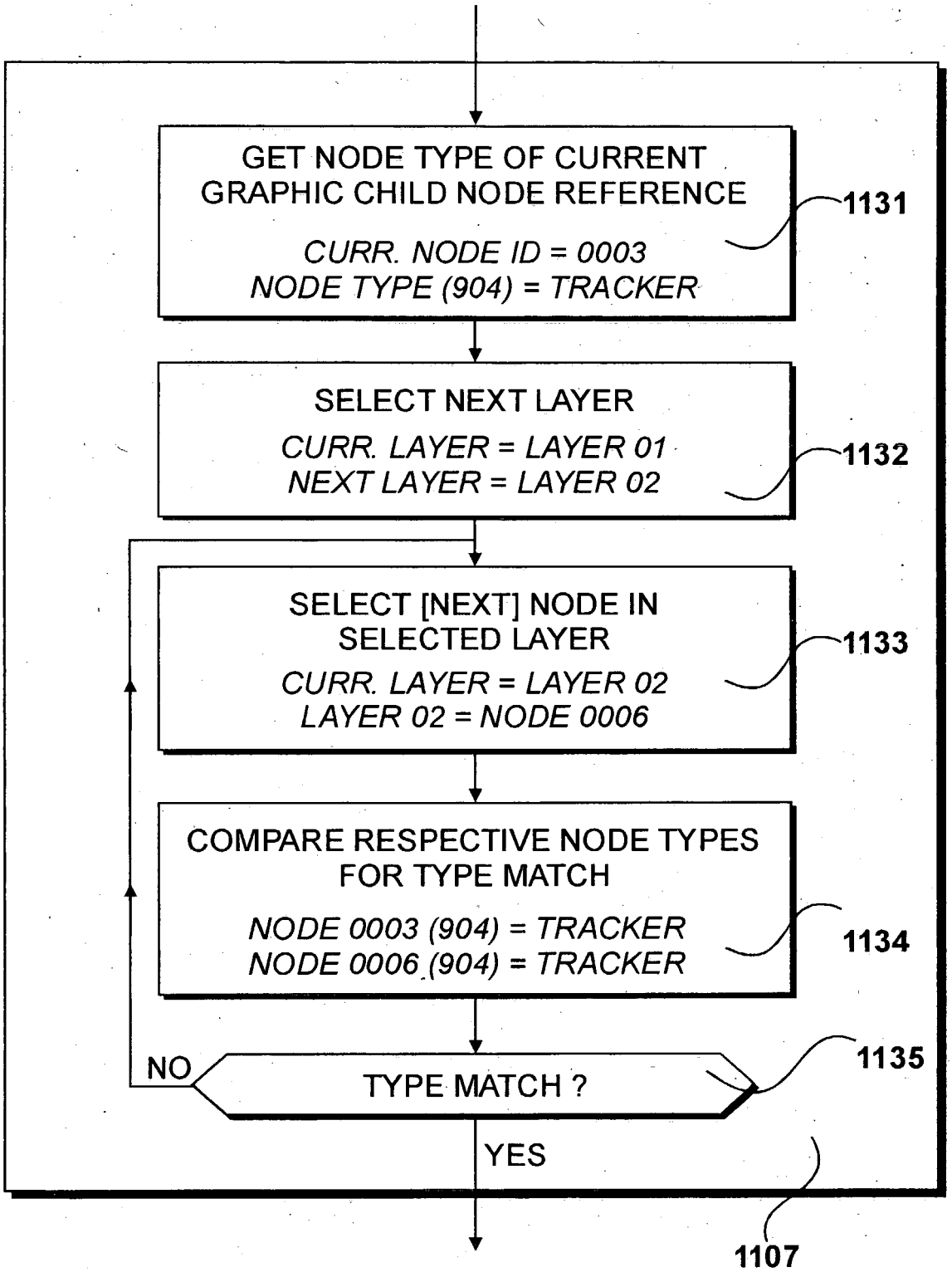

GET NODE TYPE OF CURRENT GRAPHIC CHILD NODE REFERENCE
CURR. NODE ID = 0003
NODE TYPE (904) = TRACKER
1131
SELECT NEXT LAYER
CURR. LAYER = LAYER 01
NEXT LAYER = LAYER 02
1132
SELECT [NEXT] NODE IN SELECTED LAYER
CURR. LAYER = LAYER 02
LAYER 02 = NODE 0006
1133
COMPARE RESPECTIVE NODE TYPES FOR TYPE MATCH
NODE 0003 (904) = TRACKER
NODE 0006 (904) = TRACKER
1134
NO
TYPE MATCH ?
1135
YES
1107

Figure 11C

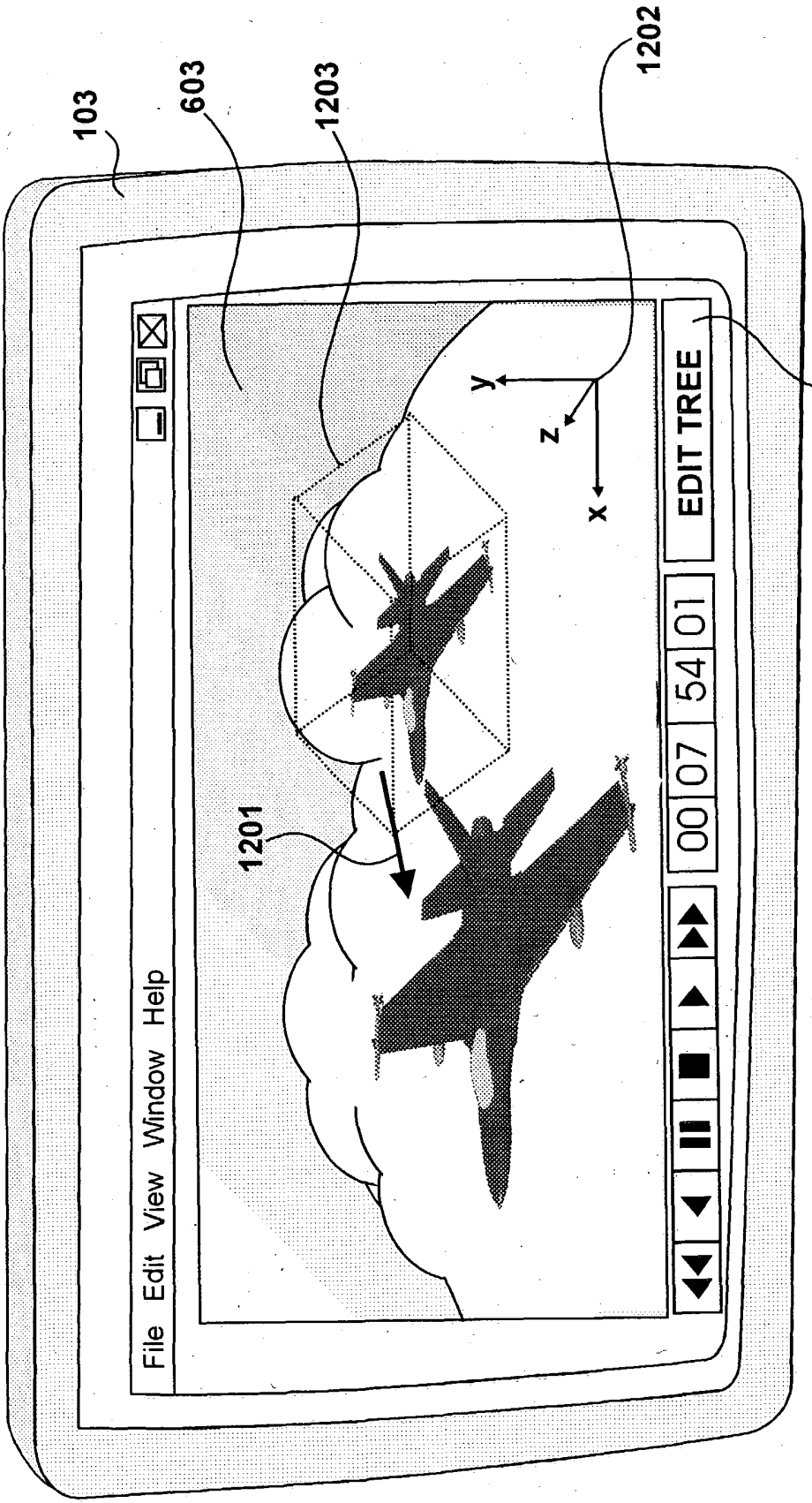

103
603
1203
1202
616
1201
File Edit View Window Help
EDIT TREE
00 07 54 01
y
z
x

Figure 12

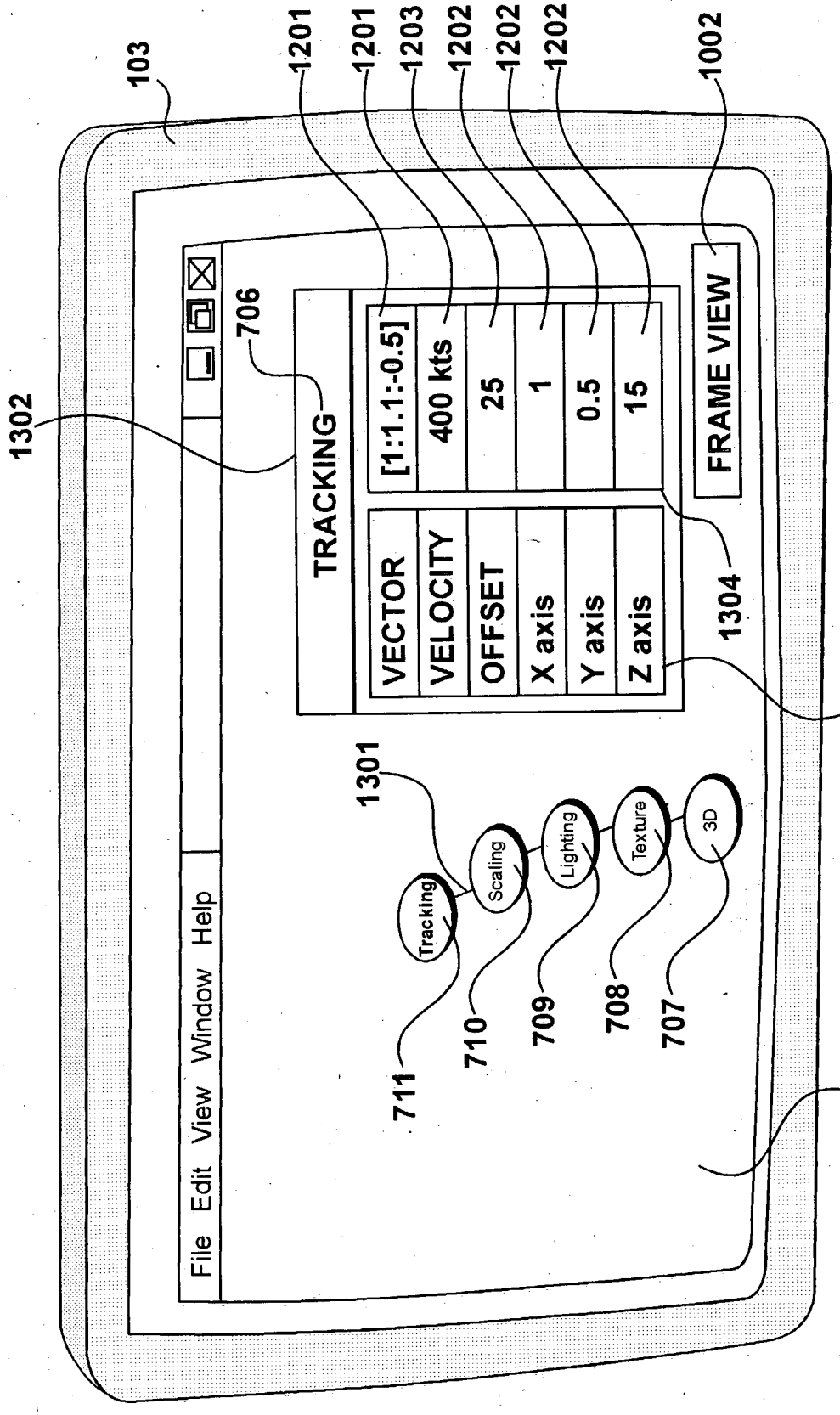

103
1201
1201
1203
1202
1202
1202
1002
706
1302
TRACKING
VECTOR
VELOCITY
OFFSET
X axis
Y axis
Z axis
[1:1.1:-0.5]
400 kts
25
1
0.5
15
FRAME VIEW
1304
1303
1301
Tracking
Scaling
Lighting
Texture
3D
711
710
709
708
707
1001
File Edit View Window Help

Figure 13

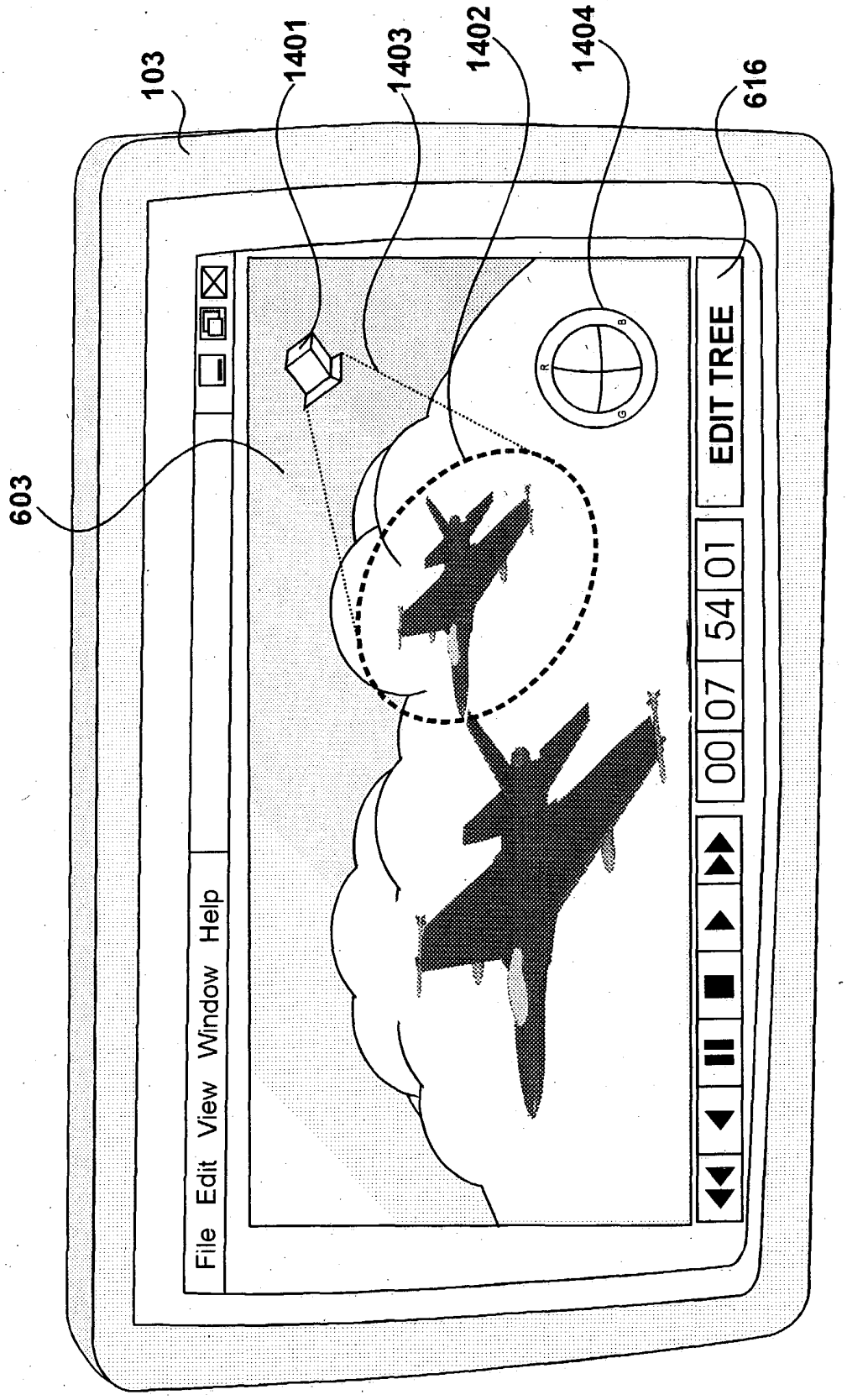

103
1401
1403
1402
1404
616
603
File Edit View Window Help
EDIT TREE
00 07 54 01
R
G
B

Figure 14

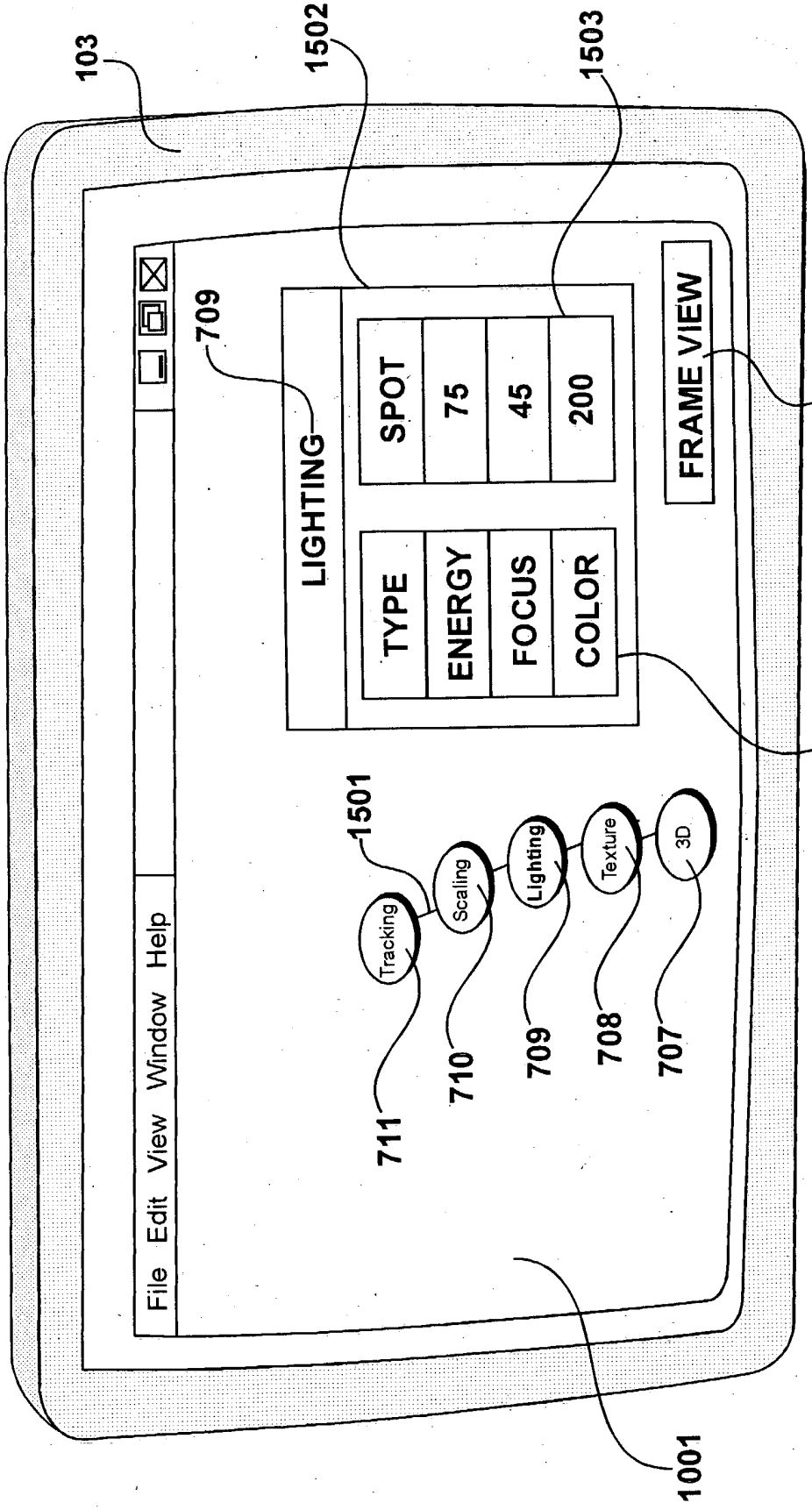

103
1502
1503
709
LIGHTING
SPOT
75
45
200
TYPE
ENERGY
FOCUS
COLOR
FRAME VIEW
1002
1502
1501
Tracking
Scaling
Lighting
Texture
3D
711
710
709
708
707
File Edit View Window Help
1001

Figure 15

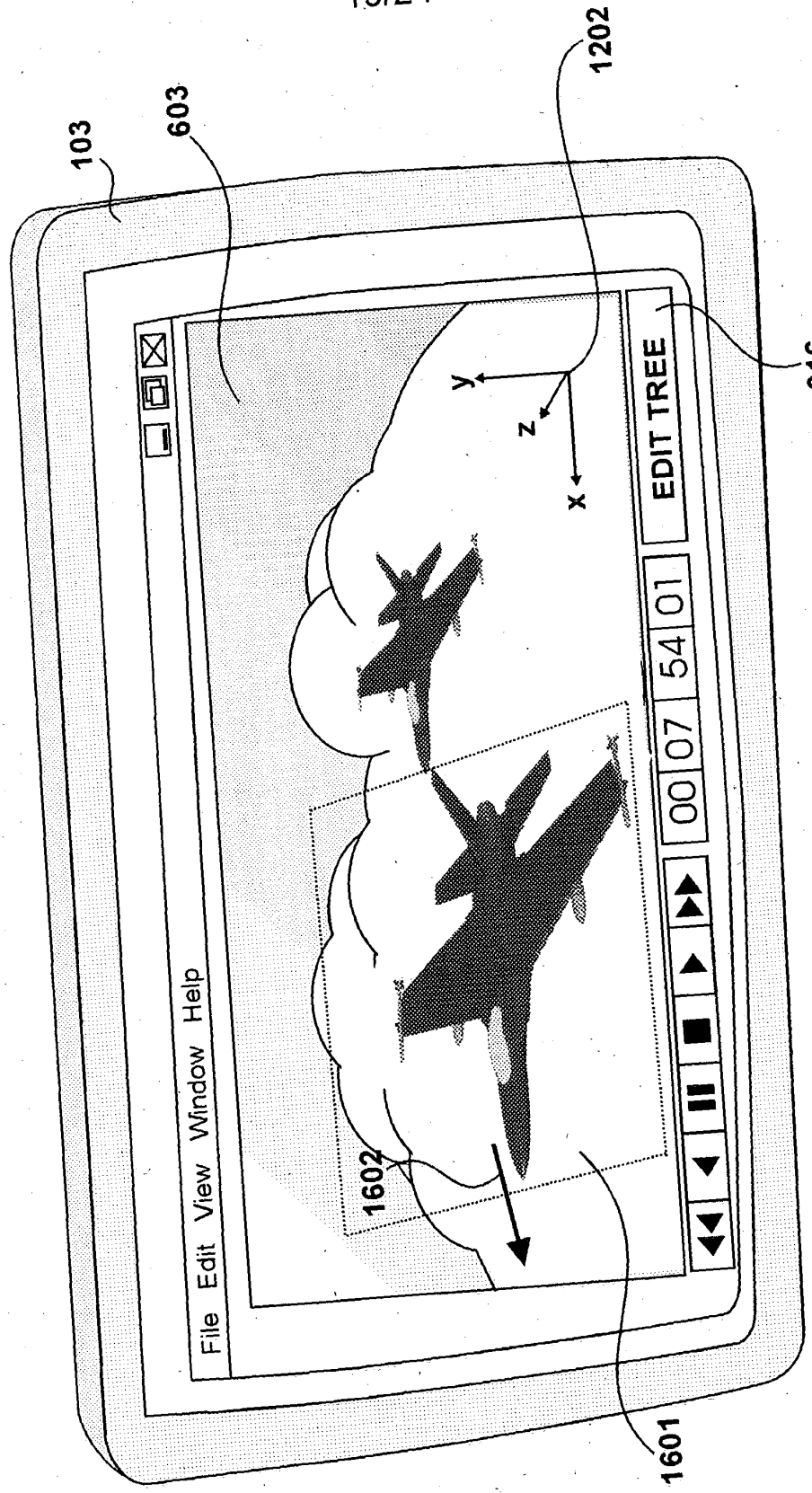

103
603
1202
616
1602
1601
File Edit View Window Help
EDIT TREE
00 07 54 01
y
z
x

Figure 16

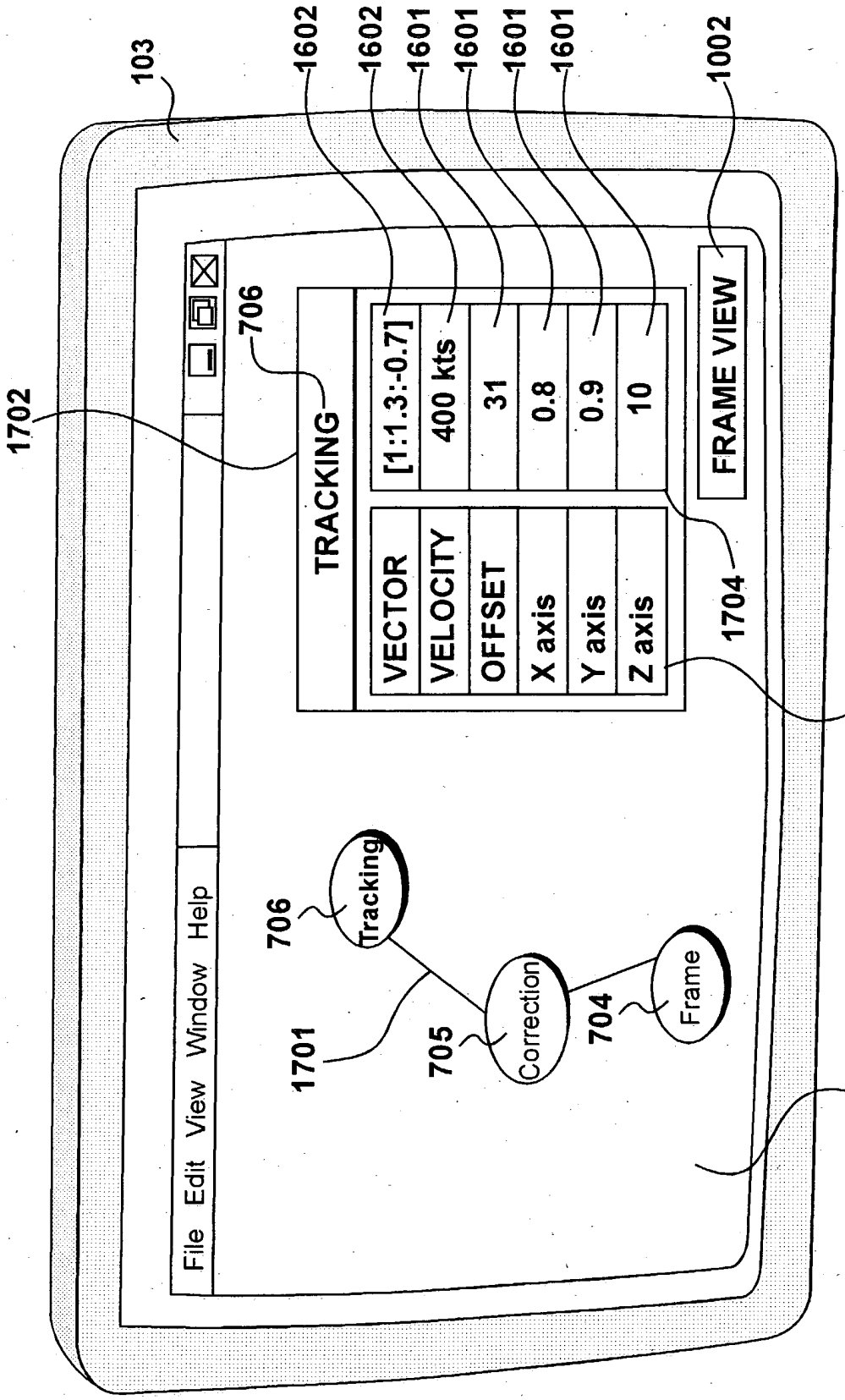

103
1602
1602
1601
1601
1601
1601
1002
1702
706
TRACKING
VECTOR
VELOCITY
OFFSET
X axis
Y axis
Z axis
[1:1.3:-0.7]
400 kts
31
0.8
0.9
10
FRAME VIEW
1704
1703
File Edit View Window Help
706
Tracking
1701
705
Correction
704
Frame
1001

Figure 17

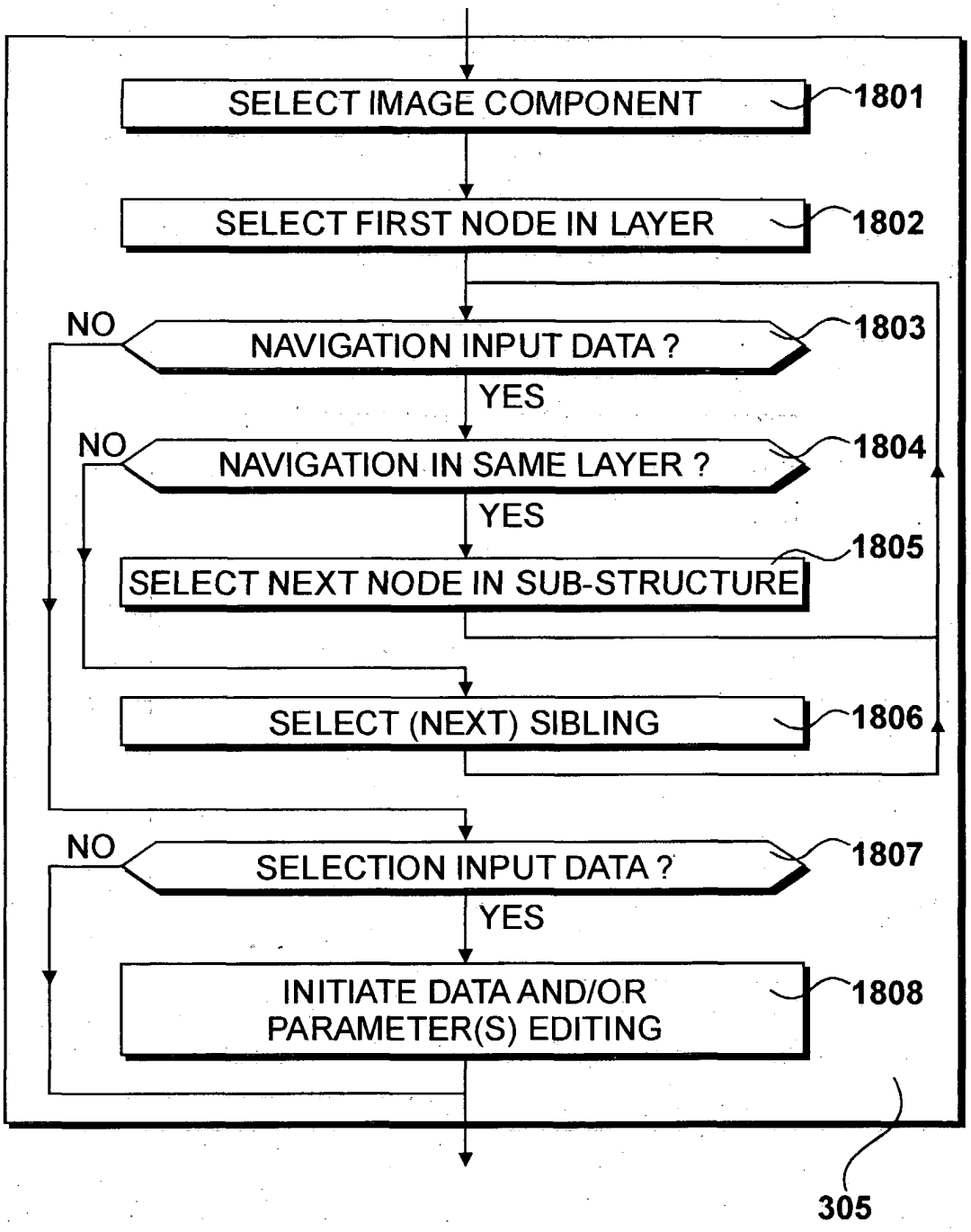

SELECT IMAGE COMPONENT
1801
SELECT FIRST NODE IN LAYER
1802
NO
NAVIGATION INPUT DATA ?
1803
YES
NO
NAVIGATION IN SAME LAYER ?
1804
YES
SELECT NEXT NODE IN SUB-STRUCTURE
1805
SELECT (NEXT) SIBLING
1806
NO
SELECTION INPUT DATA ?
1807
YES
INITIATE DATA AND/OR PARAMETER(S) EDITING
1808
305

Figure 18

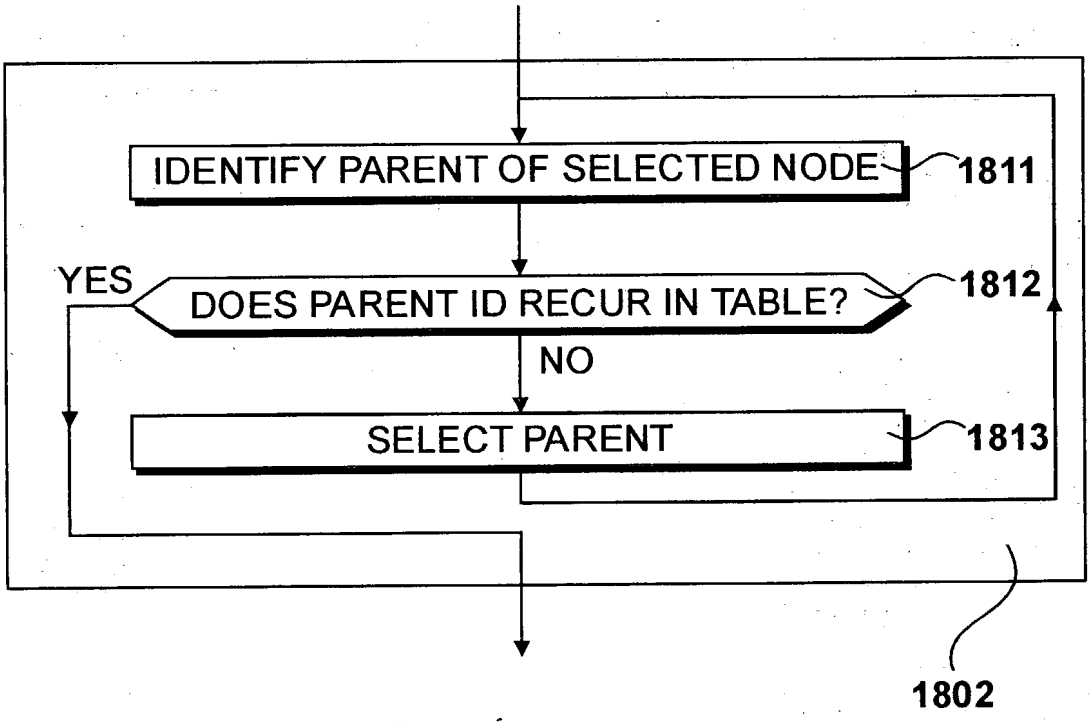

IDENTIFY PARENT OF SELECTED NODE
1811
YES
DOES PARENT ID RECUR IN TABLE?
1812
NO
SELECT PARENT
1813
1802

Figure 18A

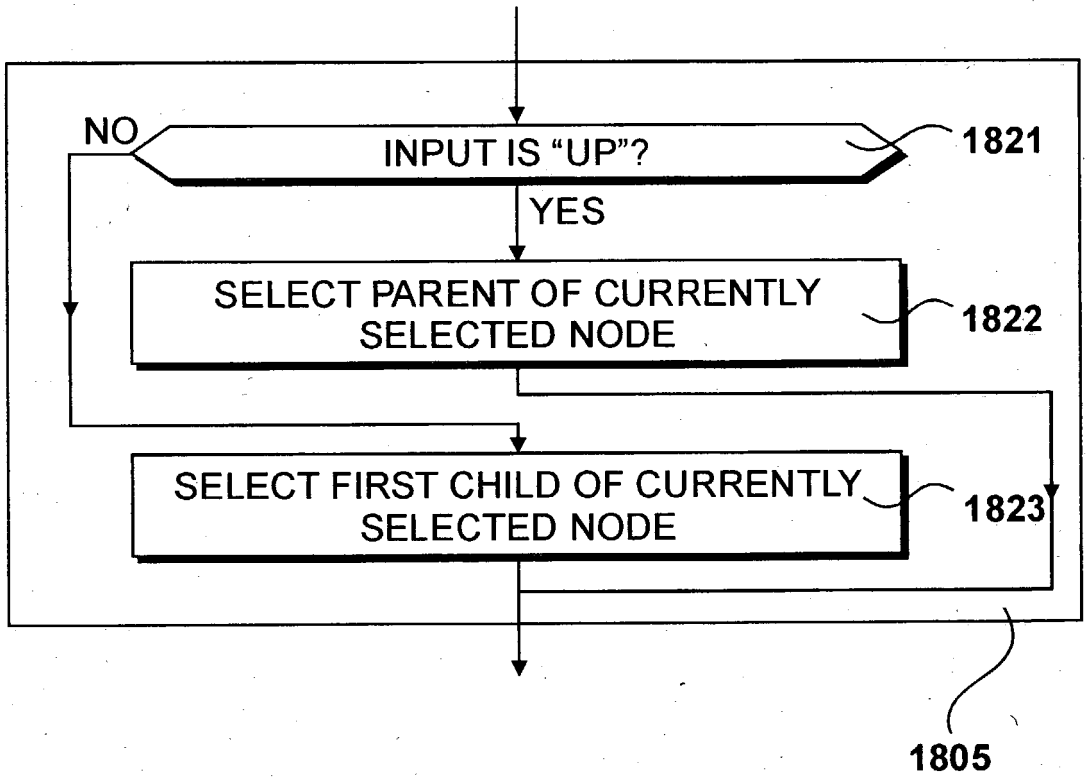

NO
INPUT IS "UP"?
1821
YES
SELECT PARENT OF CURRENTLY SELECTED NODE
1822
SELECT FIRST CHILD OF CURRENTLY SELECTED NODE
1823
1805

Figure 18B

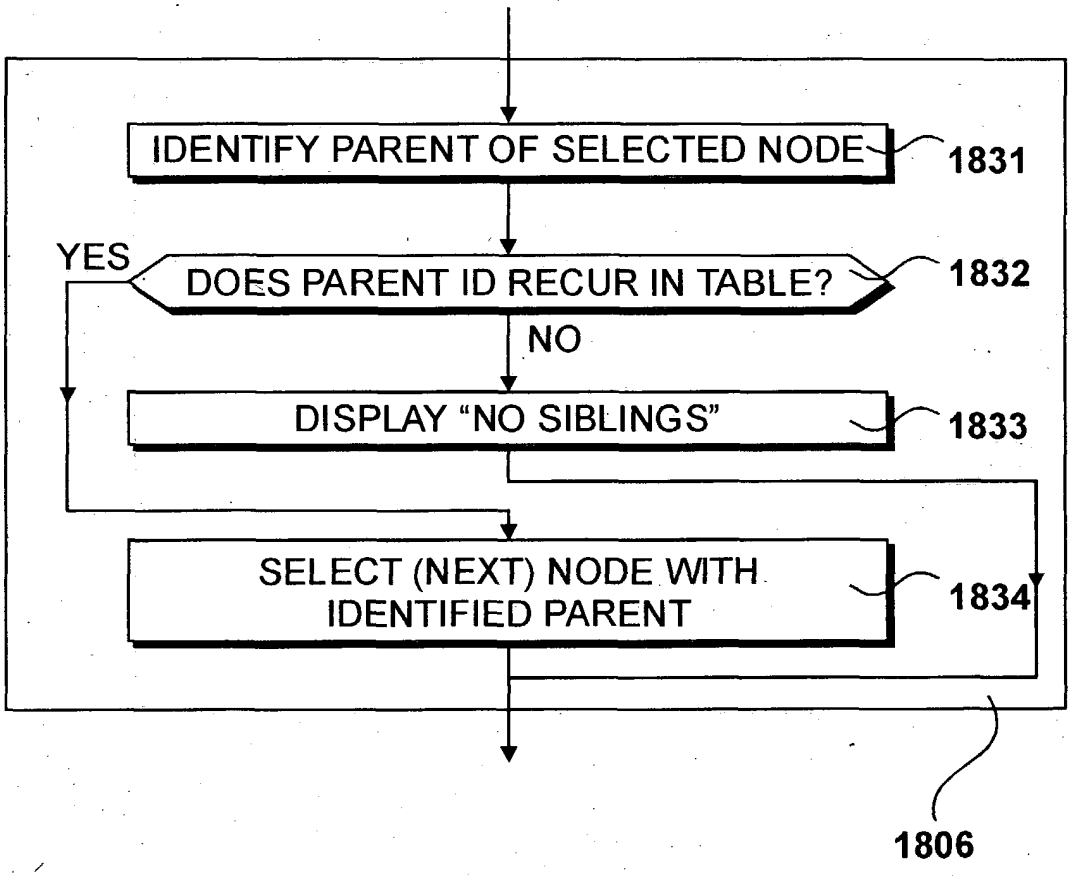

IDENTIFY PARENT OF SELECTED NODE
1831
YES
DOES PARENT ID RECUR IN TABLE?
1832
NO
DISPLAY "NO SIBLINGS"
1833
SELECT (NEXT) NODE WITH IDENTIFIED PARENT
1834
1806

Figure 18C